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21 April 1993

Post-It™ brand fax transmittal memo 7671 | # of pages ▸ 2

To DERMOTT COURTNEY	From PETER BRIGGS
Co. USEPA	Co. NYSDEC
Dept. Rm 845	Phone #
Fax # "FYI"	Fax #

Peter S. Briggs
Mineral Resources Specialist
New York DEC
Division of Mineral Resources, Room 202
50 Wolf Road
Albany NY 12233-6500

Ref: Your letter of 25 March 93.

Dear Mr. Briggs:

This letter provides responses to your comments included in the subject letter concerning our proposed use of a an oil pad in Watkins Glen Well 58 (API 31-097-21467).

1) Section 1.2 of the Spill Prevention, Control and Countermeasure Plan (SPCC) states that "This solution mining method is a common practice and has been accepted elsewhere by the New York State Department of Environmental Conservation" . This statement refers to the practice of using an oil pad to control salt cavern development, as is currently practiced within the State of New York by Morton International at their Silver Springs plant. The fact that we are intending to utilize fuel oil rather than mineral oil, while requiring extra consideration from an environmental standpoint, has no bearing upon the effectiveness of the mining method. ✓ O.K.

2) The piping at the Well 58 wellhead was designed specifically to prevent a recurrence of the 1975 spill at Well 49. Two shutoff valves are provided, with the inboard valve, flanged directly to the casinghead. This assembly does not provide the unsupported length of pipe that led to the earlier spill. ✓ O.K.

3) The mechanical integrity test performed on November 17,1992 fulfilled the requirements of the USEPA Underground Injection Control permit NYU 63860. The pressure at the wellhead was the maximum maximum water injection pressure that can be achieved with the installed injection pumps. Since the well was filled at the time with saturated brine having a specific gravity of 1.204, a surface test pressure of 331 psi produced a pressure at the casing seat at 2177' of :

THIS IS DOWNHOLE

$$331 + (2177 \times .433 \times 1.204) = 1466 \text{ psi}$$ ← NOT SPECIFIC TO QUES.

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Salt Division

This pressure is significantly higher than any that will ever be achieved during solution mining operations. During oil injection, for instance, the casing seat pressure will be :

Not specified to QV

425 + (2177 x .433 x 0.86) = 1235 psi

One advantage of the use of an oil pad in a solution mining well is that the wellhead oil pressure provides a continuous demonstration of mechanical integrity. Any loss of oil at any point in the well casing will cause the oil/brine interface to rise, resulting in a corresponding drop in the oil pressure. *

4) Brinefield operators shall be instructed to visually inspect well 58 daily, and to record the inspections in the daily log. √O.K.

5) Drawings of the secondary containment system and provisions for draining accumulated oil leaks and rainfall was provided to your office on 24 March 93. √O.K.

6) Produced brine is collected in a 75,000 bbl capacity lined pond with dimensions of 190 feet x 350 feet, which allows 41,000 gallons of ullage per inch of freeboard. √OK.

If you require any further information, please call me at 717/587-9353.

Sincerely,

Michael J. Schumacher
Minerals Development Engineer

cc: Regional Water Engineer, NYDEC Region 8
J. Loose
J.A.C. Atkins

MJS/mjs

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